



mlico@usgs.gov on 04/12/2000 11:14:06 AM

To: Wayne Praskins/R9/USEPA/US@EPA
cc: kathomas@usgs.gov, mlico@usgs.gov, hoffman@usgs.gov
Subject: Analysis of Lahontan Reservoir cores for Hg

Wayne -- the attached document details the scope of work we would like EPA to consider funding if you can find the funds. Three cores were taken this month in the deepest part of the reservoir with the USGS coring boat. Two cores were 10' in length and one was 5' long. One of the 10' cores penetrated the sediment and recovered some of the preimpoundment surface. The cores are currently frozen and stored at our office. The information gained by these analyses would help to decipher the depositional history of mercury transport to the reservoir. Please feel free to call me to discuss further. Thank you.
Mike

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(See attached file: lahontan.hg.core.rev.doc)



- lahontan.hg.core.rev.doc

RECONNAISSANCE SURVEY OF MERCURY DEPOSITION IN LAHONTAN RESERVOIR, NEVADA

PROBLEM

Lahontan Reservoir is the main receiving body for sediment derived from upstream in the Carson River Basin. Sediment being deposited in Lahontan Reservoir is contaminated with mercury from milling and processing of ore from the Comstock Lode during the 1800's. Concern about mercury in this part of the Carson River system has prompted two actions: (1) designation of the Carson River between Carson City and Lahontan Reservoir (?) as an EPA Superfund site, and (2) a consumption advisory for fish taken from Lahontan Reservoir.

OBJECTIVES

The objectives of this reconnaissance study are to (1) determine the history of mercury deposition in Lahontan Reservoir and (2) determine if mercury is being methylated enabling its uptake into the food chain.

APPROACH

Four sediment cores will be taken from the deeper parts of Lahontan Reservoir with the USGS coring boat. These cores will be subsampled to obtain samples for total mercury and methylmercury analysis. Subsamples also will be obtained for cesium-137 and grain-size analysis. Cesium-137 will help identify two ages in the core: (1) beginning of atmospheric nuclear testing (early 1950's) and (2) the peak atmospheric concentration of cesium-137 (1964). The 1915 (approx) level in the sediment column will be identified by the preimpoundment surface. Approximately 10 samples will be taken from each core for analysis. Other subsamples will be archived for future analysis of cesium-137 or other trace elements.

BUDGET

Labor	\$ 6,260
Laboratory	\$12,600
Supplies	\$ 1,500
Vehicles	\$ 400
Coring Boat time	\$ 200
Subtotal	\$20,960
Common Services	\$12,970
Total Project Costs	\$33,930

REPORTING OF DATA

All data will be published in the USGS Annual Data Report for 2000. Release date for the report is during the spring of 2001.

